



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/663,864	09/15/2000	Arnold V. Kholodenko	004117 USA/ETCH/ECT	4201

32588 7590 09/18/2002

APPLIED MATERIALS, INC.  
2881 SCOTT BLVD. M/S 2061  
SANTA CLARA, CA 95050

EXAMINER

LEON, EDWIN A

ART UNIT	PAPER NUMBER
----------	--------------

2833

DATE MAILED: 09/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/663,864

Applicant(s)

KHOLODENKO ET AL.

Examiner

Edwin A. León

Art Unit

2833

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 July 2002.
- 2a) ☒ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 22-44 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. Applicant's amendment filed July 22, 2002 in which the Specification has been amended, has been placed of record in the file as Paper No. 8.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 8, 10-11, 14, 16, 18 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Tsuji et al. (U.S. Patent No. 5,947,766). With regard to Claim 1, Tsuji et al. discloses an electrical coupler, comprising: an inner connector element (20) having opposing ends; an upper end connector (30) and a lower end connector (E); each end connector (30,E) respectively coupled to one of the opposing ends of the inner connector element (20); a thermally conductive flange (26) circumscribing the inner connector (20); and an outer connector element (15) disposed over the inner connector (20) and the thermally conductive flange (26). See Figs. 1-7.

With regard to Claim 2, Tsuji et al. discloses the opposing ends of the inner connector element (20) each comprising a bore, in which the upper and lower end connectors (30,E) are disposed. See Figs. 1-7.

With regard to Claim 3, Tsuji et al. discloses the thermally conductive flange (26) being brazed to the inner connector (20). See Figs. 1-7.

With regard to Claim 8, Tsuji et al. discloses the upper and lower end connectors (30,E) being plated with at least one electrical conductor. See Figs. 1-7.

With regard to Claim 10, Tsuji et al. discloses the upper and lower end connectors (30,E) each comprising a female banana connector disposed therein the bore. See Figs. 1-7.

With regard to Claim 11, Tsuji et al. discloses an upper male connector (B) removably inserted into the upper end connector (30). See Figs. 1-7.

With regard to Claim 14, Tsuji et al. discloses the upper male end connector (B) being plated with at least one electrical conductor. See Figs. 1-7.

With regard to Claim 16, Tsuji et al. discloses a lower male connector (E4) removably inserted into the lower end connector (E). See Figs. 1-7.

With regard to Claim 18, Tsuji et al. discloses the lower male connector (E4) being plated with at least one electrical conductor. See Figs. 1-7.

With regard to Claim 21, Tsuji et al. discloses a portion of the thermally conductive flange (26) circumscribing the inner connector (20) is exposed from the outer connector element (15) to transfer heat to a surrounding environment. See Figs. 1-7.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4-7, 9, 17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuji et al. (U.S. Patent No. 5,947,766) in view of Applicant's admitted prior art. Tsuji et al. discloses the claimed invention except for the thermally conductive flange being fabricated from a ceramic material or from the group comprising aluminum nitride and beryllium oxide, the inner connector element being fabricated from beryllium copper, the upper and lower end connectors being fabricated from beryllium copper, the upper and lower end connectors being plated with successive layers of nickel and gold, and the lower male connector being plated with successive layers of nickel and gold.

Applicant's admitted prior art discloses the use of ceramic material, aluminum nitride, beryllium oxide, beryllium copper, nickel and gold. See Page 1-2.

Thus, it would have been obvious with ordinary skill in the art to modify the coupler of Tsuji et al. by including the use of ceramic material, aluminum nitride, beryllium oxide, beryllium copper, nickel and gold as taught in Applicant's admitted prior art to allow the coupler to work in relative elevated temperatures more effectively.

Art Unit: 2833

6. Claims 12-13, 15 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuji et al. (U.S. Patent No. 5,947,766). Tsuji et al. discloses the claimed invention except for the upper male connector being fabricated from a thermally non-conductive material, the upper male end connector being fabricated from stainless steel, the upper male end connector being plated with successive layers of nickel, copper, nickel, gold and the outer connector element being fabricated from silicone.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a thermally non-conductive material, stainless steel, nickel, copper, nickel, gold and silicone, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

### ***Response to Arguments***

7. Applicant's arguments filed July 22, 2002 have been fully considered but they are not persuasive. In response to Applicant's arguments regarding Claims 1-21 that the Tsuji et al. reference does not show a thermal conductive flange circumscribing the inner connector, and each end connector being coupled to one of the opposing ends of the inner connector element, Applicant's attention is directed to Fig. 5 in the Tsuji et al. reference in which Tsuji et al. clearly discloses each end connector (30,E) respectively coupled to one of the opposing ends of the inner connector element (20); a thermally conductive flange (26) circumscribing the inner connector (20). As broad as the claims

Art Unit: 2833

are recited the Tsuji et al. reference discloses a thermally conductive flange (26), since any rubber is considered to be thermally conductive, the flange (26) circumscribing the inner connector (20), since the flange (26) circumscribe or limits the inner connector (20) from moving after being mated with element (15), and each end connector (30,E) respectively coupled to one of the opposing ends of the inner connector element (20), since the end of the connectors (30,E) and the opposing end of the inner connector element (20) are coupled or joined together with the help of a bolt (B).

### ***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

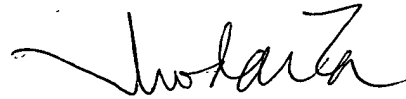
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2833

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edwin A. León whose telephone number is (703) 308-6253. The examiner can normally be reached on Monday - Friday 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on (703) 308-2319. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



**THO D. TA**  
**PRIMARY EXAMINER**

Edwin A. Leon  
AU 2833

EAL  
September 10, 2002